

WHAT IS CLAIMED IS:

1. An isolated human antibody, or binding fragment thereof, that specifically binds to T cell, immunoglobulin domain and mucin domain 1 (TIM-1).
2. The antibody of Claim 1, wherein said TIM-1 comprises the amino acid sequence shown in SEQ ID NO:54.
3. The antibody of Claim 1, wherein said antibody is a monoclonal antibody.
4. The antibody of Claim 1, wherein said binding fragment comprises a Fab, Fab', F(ab')₂, or Fv fragment of said antibody.
5. The antibody of Claim 1, wherein said antibody is a single chain antibody.
6. The antibody, or binding fragment, of Claim 1, wherein said antibody or binding fragment is associated with a pharmaceutically acceptable carrier or diluent.
7. The antibody, or binding fragment of Claim 1, wherein the antibody or binding fragment is conjugated to a therapeutic agent.
8. The antibody, or binding fragment of Claim 7, wherein the therapeutic agent is a toxin.
9. The antibody or binding fragment of Claim 7, wherein the therapeutic agent is a radioactive isotope.
10. The antibody or binding fragment of Claim 7, wherein the therapeutic agent is a chemotherapeutic agent.
11. A human antibody, or binding fragment thereof, that competes for binding with an antibody that binds to TIM-1.
12. A hybridoma cell line producing the antibody, or binding fragment, of Claim 1.
13. A transformed cell comprising a gene encoding the antibody, or binding fragment, of Claim 1.
14. The transformed cell of Claim 13, wherein the cell is a Chinese hamster ovary (CHO) cell.
15. A method of inhibiting cell proliferation associated with the expression of TIM-1, comprising treating cells expressing TIM-1 with an effective amount of a human

antibody, or binding fragment thereof, that specifically binds to T cell, immunoglobulin domain and mucin domain 1 (TIM-1).

16. The method of Claim 15, wherein the method is performed *in vivo*.
17. The method Claim 16, wherein the method is performed on a mammal.
18. The method of Claim 17, wherein the mammal is a human.
19. The method of Claim 17, wherein the mammal suffers from a cancer involving epithelial cell proliferation.
20. The method of Claim 19, wherein the cancer comprises a lung, colon, gastric, kidney, renal, prostate or ovarian carcinoma.
21. A method of effectively treating renal cancer comprising:
identifying an animal in need of treatment for renal cancer;
administering to said animal a therapeutically effective dose of the antibody of Claim 1.
22. A method of effectively treating ovarian cancer comprising:
identifying an animal in need of treatment for ovarian cancer;
administering to said animal a therapeutically effective dose of the antibody of Claim 1.
23. An article of manufacture comprising a container, a composition contained therein, and a package insert or label indicating that the composition can be used to treat cancer characterized by the overexpression of TIM-1, wherein the composition comprises the antibody, or binding fragment, of Claim 1.
24. The article of manufacture of Claim 23, wherein the cancer is a lung, colon, gastric, kidney, renal, prostate or ovarian carcinoma.
25. An assay kit for the detection of TIM-1 in mammalian tissues or cells in order to screen for lung, colon, gastric, kidney, renal, prostate or ovarian carcinomas, the TIM-1 being an antigen expressed by lung, colon, gastric, kidney, renal, prostate or ovarian carcinomas, the kit comprising an antibody that binds the antigen protein and means for indicating the reaction of the antibody with the antigen, if present.
26. The assay kit of Claim 25, wherein the antibody is a monoclonal antibody.

27. The assay kit of Claim 25, wherein the antibody that binds the antigen is labeled.

28. The assay kit of Claim 25, wherein the antibody is an unlabeled first antibody and the means for indicating the reaction comprises a labeled second antibody that is anti-immunoglobulin.

29. The assay kit of Claim 27, wherein the antibody that binds the antigen is labeled with a marker selected from the group consisting of a fluorochrome, an enzyme, a radionuclide and a radiopaque material.

30. The assay kit of Claim 28, wherein the second antibody is labeled with a marker selected from the group consisting of a fluorochrome, an enzyme, a radionuclide and a radiopaque material.

31. An isolated human antibody, or binding fragment thereof, that specifically binds to a polypeptide comprising the amino acid sequence of SEQ ID NO:87.

32. An isolated human antibody that binds to TIM-1 and is encoded by a VH3-33 germline gene.

33. The isolated human antibody of Claim 32, wherein said antibody binds to TIM-1 with a K_d between 10^{-7} and 10^{-14} M.